

CLAIMS

What is claimed is:

1. A system for shielding sensors from airborne particulate matter in the environment of an electrostatic image reproduction device, said system comprising:

5 a moving surface;

at least one sensor; and

a shield having at least one shield window, said shield adapted to be placed between said moving surface and said sensor, and said shield at least partially encloses a subsystem of said image reproduction device;

10 wherein the movement of said surface, and said shield and said shield window cooperate to move air through said shield window past said sensor toward said moving surface.

2. The system of Claim 1, wherein said sensor is a process control sensor.

3. The system of Claim 1, wherein said sensor is an optical sensor having a
15 line-of-sight view of said moving surface through said shield window.

4. A system for shielding sensors from airborne particulate matter in the environment of an electrostatic image reproduction device, said system comprising:

a moving surface;

at least one extended toner area coverage (ETAC) sensor; and

20 a shield having at least one shield window, said shield adapted to be placed between said moving surface and said sensor, and said shield at least partially encloses a subsystem of said image reproduction device;

wherein said sensor has a line-of-sight view of said moving surface through said shield window, and wherein the movement of said surface, and said shield and said shield window cooperate to move air through said shield window past said sensor toward said moving surface

5 5. The system of Claim 3, wherein said sensor is a marks on belt (MOB) sensor.

6. The system of Claim 1, wherein said moving surface comprises a photoreceptor (PR) belt.

10 7. The system of Claim 1, wherein said moving surface comprises a photoreceptor (PR) drum.

8. The system of Claim 1, wherein said shield window is square shaped.

9. The system of Claim 1, wherein said shield window is circular.

15 10. The system of Claim 1, wherein said moving surface comprises a photoreceptor (PR), and said sensor is an optical sensor having a line-of-sight view of said moving surface through said shield window.

11. A method for shielding sensors from airborne particulate matter in the environment of an electrostatic image reproduction device, said method comprising:

providing a moving surface;

providing at least one sensor;

20 placing a shield having at least one shield window between said moving surface and said sensor;

via said shield, at least partially enclosing a subsystem of said image reproduction device; and

via the movement of said surface, and said shield and said shield window, moving air through said shield window past said sensor toward said moving surface.

5 12. The method of Claim 11, wherein said sensor is a process control sensor.

13. The method of Claim 11, wherein said sensor is an optical sensor having a line-of-sight view of said moving surface through said shield window.

14. The method of Claim 13, wherein said sensor is an extended toner area coverage (ETAC) sensor.

10 15. The method of Claim 13, wherein said sensor is a marks on belt (MOB) sensor.

16. The method of Claim 11, wherein said moving surface comprises a photo-receptor (PR) belt.

15 17. The method of Claim 11, wherein said moving surface comprises a photo-receptor (PR) drum.

18. The method of Claim 11, wherein said shield window is square shaped.

19. The method of Claim 11, wherein said shield window is circular.

20 20. The method of Claim 11, wherein said moving surface comprises a photo-receptor (PR), and said sensor is an optical sensor having a line-of-sight view of said moving surface through said shield window.